

CLAIMS

We claim:

1. A coil stop for a railroad coil car, the coil car having a trough structure in which to carry coils, the trough structure having two sides and a longitudinal dimension, the coil stop having a weight, wherein said coil stop comprises:
 - a first member for blocking motion of the coils;
 - said first member being repositionable along said trough structure;
 - a releasable securement fitting connected to said first member, said securement fitting being operable to locate said first member relative to the trough structure;
 - at least one transport fitting connected to said first member, said transport fitting being movable between a first position and a second position relative to said first member;
 - in said first position said transport fitting engaging the trough structure and supporting a greater portion of said weight of said coil stop than in said second position; and
 - in said first position of said transport fitting said first member having less resistance to longitudinal motion relative to the trough structure than when said transport fitting is in said second position.
2. The coil stop of claim 1, wherein:
 - said transport fitting includes a load bearing member of load bearing members selected from the group consisting of a roller, a slider, a wheel with a bearing, and ball caster;
 - said load bearing member is connected to said first member and is moveable between a first position corresponding to the first position of said transport fitting and a second position corresponding to the second position of said transport fitting; and
 - said load bearing member is operable to travel along the trough structure and bears a greater portion of the weight of said coil stop in said first position than in said second position.
3. A coil stop according to claim 2 wherein said load bearing member is a slider.

4. A coil stop according to claim 2 wherein said load bearing member is a roller.
5. A coil stop according to claim 2 wherein said load bearing member is disengaged from the trough structure in said second position.
6. A coil stop according to claim 2, said transport fitting further including:
 - a cam movably mounted to said first member;
 - an actuator mechanically connected to move said cam;
 - a cam follower mounted to said first member at a pivot point, said cam follower being operable to engage said cam and to pivot about said pivot point;
 - an arm connecting said cam follower and said load bearing member;
 - said actuator being operable to move said cam; and
 - said cam follower being driven by said actuator to urge said load bearing member to move toward said first position.
7. The coil stop of claim 6, wherein said transport fitting further includes:
 - a shaft having a first end and a second end, said shaft being mounted to said first member, said first end having said cam attached thereto; and
 - said actuator is a handle fixed to said shaft, said handle being operable to rotate said shaft to urge said load bearing member to move toward said first position.
8. A coil stop according to claim 7, wherein said first member includes a beam member for spanning the trough structure, said beam member having a first end, a second end, and a medial portion extending between said first and second ends; and a step is mounted to said medial portion of said beam member between said first and second ends to facilitate climbing of said coil stop.
9. A coil stop according to claim 8 wherein said step includes a tread plate mounted upon said medial portion of said beam member.
10. A coil stop according to claim 8 wherein a hand grab is mounted to said medial portion of said beam member adjacent to said step.
11. A coil stop according to claim 10 wherein said hand grab is said handle fixed to said shaft.

12. A coil stop according to claim 8 wherein a pair of first and second hand grabs are mounted to either side of said step.
13. A coil stop according to claim 1, wherein said at least one transport fitting is biased by gravity toward said second position.
14. A coil stop according to claim 1, wherein said at least one transport fitting includes a spring biasing said transport fitting toward the second position.
15. A coil stop according to claim 1, wherein said securement fitting includes at least one indexing member mounted to said first member, said indexing member being engageable to maintain said coil stop in a fixed position relative to the trough structure.
16. A coil stop according to claim 1, wherein:
 - said first member spans the trough structure;
 - said first member has a first end and a second end; and
 - said first end has a first transport fitting and said second end has a second transport fitting connected thereto.
17. A coil stop for a railroad coil car, the coil car having a trough structure in which to carry coils, the trough structure having two sides and a longitudinal dimension, said coil stop having a weight, said coil stop comprising:
 - a first member for blocking motion of the coils along the trough structure;
 - said first member being mounted spunwise relative to the trough structure;
 - said first member being repositionable along the trough structure;
 - a releasable securement fitting connected to said first member, operable to locate said first member relative to the trough structure;
 - at least one transport fitting connected to said first member, said transport fitting including a roller connected to said first member, said roller being movable between a first position and a second position relative to said first member;
 - in said first position said roller being operable to ride longitudinally on the trough structure; and
 - said roller supporting a greater portion of weight of said first member when in said first position than when in said second position.
18. A coil stop according to claim 17, wherein:

said first member spanning the trough structure has a first end and a second end; and

said first end has a first transport fitting and a first securement fitting connected thereto and said second end has a second transport fitting and a second securement fitting connected thereto.

19. A coil stop according to claim 17, said transport fitting further including:
 - a cam movably mounted to said first member;
 - an actuator mechanically connected to move said cam;
 - a cam follower mounted to said first member at a pivot point, said cam follower being operable to engage said cam and to pivot about said pivot point;
 - an arm connecting said cam follower and said load bearing member;
 - said actuator being operable to move said cam; and
 - said cam follower being driven by said actuator to urge said load bearing member to move toward said first position.
20. A coil stop according to claim 19, said transport fitting further including:
 - a shaft having a first end and a second end, said shaft being mounted to said first member, said first end having said cam attached thereto; and
 - said activator is a handle fixed to said shaft, said handle being operable to rotate said shaft to urge said load bearing member to move toward said first position.
21. A coil stop according to claim 20, wherein:
 - said first member includes a beam member for spanning the trough structure, said beam member having a first end, a second end, and a medial portion extending between said first and second ends; and
 - a step is mounted to said medial portion of said beam member between said first and second ends to facilitate climbing over said coil stop.
22. A coil stop according to claim 21 wherein said step includes a tread plate mounted upon said medial portion of said beam member.
23. A coil stop according to claim 21 wherein a hand grab is mounted to said medial portion of said beam member adjacent to said step.
24. A coil stop according to claim 20 wherein said hand grab is said handle fixed to said shaft.

25. A coil stop according to claim 21 wherein a pair of first and second hand grabs are mounted to either side of said step.
26. A combination of a rail road coil car and a coil stop for use in combination therewith, the coil car having a trough structure for carrying coils, the trough structure being supported by rail car trucks for rolling motion along a rail road track, the coil stop being mounted across the trough and having retractable rollers, the retractable rollers being operable to engage the trough structure and to facilitate repositioning of the coil stop along the trough structure.
27. The combination of claim 26 wherein said coil stop has an actuator connected to said rollers, said actuator being operable to place rollers in a first position in which said rollers engage said trough structure.
28. The combination of claim 27 wherein said rollers are biased away from said first position.
29. The combination of claim 28 wherein said rollers are biased by gravity.
30. The combination of claim 26 wherein said coil stop has a releasable securement fitting operable to locate said coil stop in a fixed position relative to said trough structure.
31. The combination of claim 26 wherein said coil stop has a mid-span handle connected to move said retractable rollers to an engaged position relative to said trough structure.
32. The combination of claim 31 wherein said coil stop has a step mounted thereon.
33. The combination of claim 32 wherein said step is mounted adjacent to said handle.
34. The combination of claim 26 wherein said trough structure has a central walkway extending longitudinally with respect thereto.
35. A combination of a rail road coil car and a coil stop for use therewith, and wherein:
said coil car has a trough structure in which to carry coils, said trough structure having a first side, a second side and a longitudinal dimension;

said coil stop has a first member mounted in a spanning position relative to said trough structure, for blocking motion of the coils along the trough structure;

said first member being repositionable along said trough structure;

a securement fitting operable to locate said first member relative to said structure;

a track mounted to said trough structure, said track extending along said trough structures;

said track following member being operable to ride on said track;

said track following member being movable between a first position and a second position relative to said first member;

a track following member connected to said first member in said first position, said track to bear at least a portion of the weight of said coil stop;

said track following member supporting a greater portion of the weight of said first member when said track following member is in said first position than when said track following member is in said second position; and

in said first position of said track following member said coil stop having less resistance to motion along said trough structure than when said track following member is in said second position.

36. A coil stop in combination with a railroad coil car according to claim 35 said first portion further including:
 - a cam movably mounted to said first member;
 - an actuator mechanically connected to move said cam;
 - a cam follower mounted to said first member at a pivot point, said cam follower being operable to engage said cam and to pivot about said pivot point;
 - an arm connecting said cam follower and said track following member;
 - said actuator being operable to move said cam; and
 - said cam follower being driven by said actuator to urge said track following member to move toward said first position.
37. A coil stop in combination with a railroad coil car according to claim 36, said first portion further including:
 - a shaft having a first end and a second end, said shaft being mounted to said first member, said first end having said cam attached thereto; and

said actuator is a handle fixed to said shaft, said handle being operable to rotate said shaft to urge said track following member to move toward said first position.

38. A combination of a rail road coil car and a coil stop for use therewith, said coil stop having a weight and wherein:

said coil car has a trough structure in which to carry coils, the trough structure having a first side, a second side and a longitudinal dimension;

said coil stop has a beam member spanning the trough structure; the coil stop is repositionable along the trough structure to obstruct motion of coils along the trough structure;

said beam member has a first end, a second end, and a medial portion between said first and second ends;

a first trackway is mounted on the first side of the trough structure and a second trackway mounted on the second side of the trough structure for guiding the repositioning of said coil stop;

a first pair of rollers is connected to the first end of said beam member, the first pair of rollers is movable between a first position and a second position relative to said first trackway;

in said first position said first pair of rollers is operable to travel along said first trackway and to bear a greater portion of weight of said beam member than when said first pair of rollers is in said second position;

a second pair of rollers is connected to the second end of said beam member;

the second pair of rollers is movable relative to said second trackway between a first position corresponding to said first position of said first pair of rollers and a second position corresponding to said second position of said first pair of rollers;

in said first position said second pair of rollers is being operable to travel along said second trackway and to bear a greater portion of weight of said beam member than in said second position;

a shaft having a first end and a second end, said shaft extending between the first and second ends of said beam member, said shaft being rotatably mounted to said beam member;

a first cam attached to said first end of said shaft and a second cam attached to said second end of said shaft;

a first pair of cam followers mounted to said beam member and operable to engage said first cam and a second pair of cam followers mounted to said beam member and operable to engage said second cam;

a first pair of arms connecting said first pair of cam followers to said first pair of rollers, said first pair of arms being operable to urge said first pair of rollers to move between said first and second positions, and a second pair of arms connecting said second pair of cam followers to said second pair of rollers, said second pair of arms being operable to urge said second pair of rollers to move between said first and second positions;

a handle fixed to said shaft, said handle being operable to rotate said shaft to urge said rollers to move between said first and second positions; and

a pair of first indexing members mounted to the first and second ends of said beam member and a pair of second indexing members mounted to the first and second sides of the trough structure, said indexing members being cooperable to maintain said beam member in a fixed position relative to the trough structure.

39. The combination according to claim 38, the combination further including:
- a step mounted on said medial portion of said beam member between said first and second ends, whereby to facilitate climbing over said beam member.